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U.S. Patent Application Serial No. 10/627,348
Reply to Office Action dated September 25, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (CURRENTLY AMENDED) A method of obtaining printed instances of a document, the method comprising
 - distributing copies of electronic document data to document processors, the electronic document data containing instructions for printing each instance from a respective one of the document processors;
 - including a definition of a user data input field in the electronic document data, for receiving a string of characters entered in said field;
 - including an embedded program embedded in the electronic document data, linked to the user data input field, ~~for generating wherein the embedded program generates~~ commands to print geometrical elements of a barcode, that represent a series of codewords derived by the embedded program from the characters in the string received from the user data input field, each codeword being represented as a respective configuration of printed geometrical elements and their background in a respective area of the barcode.
2. (PREVIOUSLY PRESENTED) A method according to Claim 1, wherein the embedded program is arranged to make at least one of the configurations dependent on a further factor other

U.S. Patent Application Serial No. 10/627,348
Reply to Office Action dated September 25, 2007

than the codeword represented by the configuration that will be decoded upon decoding the barcode.

3. (ORIGINAL) A method according to Claim 1, wherein the embedded program makes the configurations dependent on the specific area in which the codeword is represented, so that mutually different configurations will result from representing a specific codeword dependent on whether the specific codeword is represented in one region or another.
4. (PREVIOUSLY PRESENTED) A method as claimed in Claim 3, wherein the embedded program is arranged to control printing of the barcode as a two dimensional barcode, at least part of the areas having mutually different shapes, the embedded program adapting the commands to print the elements of the configuration that is used to represent a codeword according to the shape of the area in which the codeword is represented.
5. (PREVIOUSLY PRESENTED) A method as claimed in Claim 3, wherein the embedded program is arranged to include additional information in the areas, the additional information being independent of the codewords represented in the areas, the additional information being included by adding geometrical elements, removing geometrical elements and/or modifying visual properties of part of the geometrical elements that represent at least one of the codewords, dependent on the area in which the codeword is represented in a way that does not affect a decoded result when the barcode is decoded after scanning.
6. (PREVIOUSLY PRESENTED) A method as claimed in Claim 4, wherein the embedded program is arranged to print additional geometrical elements that extend from within a region that is defined by all geometrical elements that will be used to decode the barcode in the printed document, to outside said region among further printed items of the document, so that the

U.S. Patent Application Serial No. 10/627,348
Reply to Office Action dated September 25, 2007

additional geometrical elements do not affect a decoded result when the barcode is scanned and decoded.

7. (ORIGINAL) A method as claimed in Claim 4, wherein the geometrical elements each have a property that does not affect the decoded data, the embedded program being arranged to set said property in different ones of the geometrical elements in at least one area that represents a codeword differently during printing.

8. (PREVIOUSLY PRESENTED) A method as claimed in Claim 7, wherein the embedded program is arranged to select a color and/or grey level density of different geometrical elements differently, as a predetermined function of position in an area where the barcode is printed.

9. (CURRENTLY AMENDED) [[A]] An electronic document processor, comprising a user data input device and a connection for a printer, the electronic document processor having a loaded electronic form that contains a definition of a user data entry field for receiving a string of input characters from a user, the processor being arranged to extract and execute an embedded program embedded in the electronic form from the document, the embedded program being linked to the user data input field, ~~for generating wherein the embedded program generates~~ commands to print geometrical elements of a barcode that encodes a series of codewords derived by the embedded program from the characters in the string received from the user data input field, each codeword represented as a configuration of printed geometrical elements and their background in a respective area of the barcode.

10. (PREVIOUSLY PRESENTED) An electronic document processor as claimed in Claim 9, wherein the embedded program is arranged to make at least one of the configurations dependent on a further factor other than the codeword represented by the configuration that will be decoded upon decoding the barcode.

U.S. Patent Application Serial No. 10/627,348
Reply to Office Action dated September 25, 2007

11. (ORIGINAL) An electronic document processor as claimed in Claim 9, wherein the embedded program makes the configurations dependent on the specific area in which the codeword is represented, so that mutually different configurations will result to represent a specific codeword dependent on whether the specific codeword is represented in one region or another.
12. (PREVIOUSLY PRESENTED) An electronic document processor as claimed in Claim 11, wherein the embedded program is arranged to control printing of the barcode as a two dimensional barcode, at least part of the areas having mutually different shapes, the embedded program adapting the commands to print the elements of the configuration that is used to represent a codeword according to the shape of the area in which the codeword is represented.
13. (PREVIOUSLY PRESENTED) An electronic document processor as claimed in Claim 11, wherein the embedded program is arranged to include additional information in the areas, the additional information being independent of the codeword represented in the areas, the additional information being included by adding geometrical elements, removing geometrical elements and/or modifying visual properties of part of the geometrical elements that represent at least one of the codewords, dependent on the area in which the codeword is represented in a way that does not affect a decoded result when the barcode is scanned and decoded.
14. (PREVIOUSLY PRESENTED) An electronic document processor as claimed in Claim 13, wherein the embedded program is arranged to print additional geometrical elements that extend from within a region that is defined by all geometrical elements that will be used to decode the barcode in the printed document, to outside said region among further printed items of the document, so that the additional geometrical elements do not affect a decoded result when the barcode is scanned and decoded.

U.S. Patent Application Serial No. 10/627,348
Reply to Office Action dated September 25, 2007

15. (ORIGINAL) An electronic document processor as claimed in Claim 13, wherein the geometrical elements each have a property that does not affect the decoded data, the embedded program being arranged to set said property in different ones of the geometrical elements in at least one area that represents a codeword differently during printing.
16. (PREVIOUSLY PRESENTED) An electronic document processor as claimed in Claim 15, wherein the embedded program is arranged to select a color and/or grey level density of different geometrical elements differently, as a predetermined function of position in an area where the barcode is printed.
17. (CURRENTLY AMENDED) An electronic form stored on a computer that contains a definition of a user data entry field for receiving a string of input characters from a user and an embedded program embedded in the electronic form and linked to the user data input field, for generating wherein the embedded program generates commands to print geometrical elements of a barcode, that represents a series of codewords derived by the embedded program from the characters in the string received from the user data input field, each codeword represented as a configuration of printed geometrical elements and their background in a respective area of the barcode.
18. (PREVIOUSLY PRESENTED) An electronic form according to Claim 17, wherein the embedded program is arranged to make at least one of the configurations dependent on a further factor other than the codeword represented by the configuration that will be decoded upon decoding the barcode.
19. (ORIGINAL) An electronic form according to Claim 17, wherein the embedded program makes the configurations dependent on the specific area in which the codeword is represented, so

U.S. Patent Application Serial No. 10/627,348
Reply to Office Action dated September 25, 2007

that mutually different configurations will result from representing a specific codeword dependent on whether the specific codeword is represented in one region or another.

20. (PREVIOUSLY PRESENTED) An electronic form as claimed in Claim 19, wherein the embedded program is arranged to control printing of the barcode as a two dimensional barcode, at least part of the areas having mutually different shapes, the embedded program adapting the commands to print the elements of the configuration that is used to represent a codeword according to the shape of the area in which the codeword is represented.

21. (PREVIOUSLY PRESENTED) An electronic form as claimed in Claim 19, wherein the embedded program is arranged to include additional information in the areas, the additional information being independent of the codewords that are represented in the areas, the additional information being included by adding geometrical elements, removing geometrical elements and/or modifying visual properties of part of the geometrical elements that represent at least one of the codewords, dependent on the area in which the codeword is represented in a way that does not affect a decoded result when the barcode is scanned and decoded.

22. (ORIGINAL) An electronic form as claimed in Claim 21, wherein the embedded program is arranged to print additional geometrical elements that extend from within a region that is defined by all geometrical elements that will be used to decode the in the printed document, to outside said region among further printed items of the document, so that the additional geometrical elements do not affect a decoded result when the is scanned and decoded.

23. (ORIGINAL) An electronic form as claimed in Claim 21, wherein the geometrical elements each have a property that does not affect the decoded data, the embedded program being arranged to set said property in different ones of the geometrical elements in at least one area that represents a codeword differently during printing.

U.S. Patent Application Serial No. 10/627,348
Reply to Office Action dated September 25, 2007

24. (PREVIOUSLY PRESENTED) An electronic form as claimed in Claim 23, wherein the embedded program is arranged to select a color and/or grey level density of different geometrical elements differently, as a predetermined function of position in an area where the barcode is printed.
25. (PREVIOUSLY PRESENTED) A machine readable medium, comprising an electronic form stored on a computer according to Claim 17.
26. (CURRENTLY AMENDED) A method of authoring an electronic document, the method comprising
- including a definition of a field for entering a string of characters in the document;
 - providing software building blocks for building an embedded program embedded in the electronic document, the embedded program ~~for~~ generating commands to print geometrical elements of a barcode, so that the generated barcode is decodable according to a predetermined standard,
 - assembling the building blocks into the embedded program during authoring of the document, while adapting the embedded program to make a visual aspect of the barcodes generated under control of the embedded program specific to the document and/or the field, without affecting a result of decoding the barcode.
27. (CURRENTLY AMENDED) A document authoring machine, for generating an electronic document that includes a field for entering a string of characters and an embedded program embedded in the electronic document and linked to the field, wherein the embedded program generates ~~for generating~~ commands to print geometrical elements of a barcode, the machine comprising software building blocks for building the embedded program so that the

U.S. Patent Application Serial No. 10/627,348
Reply to Office Action dated September 25, 2007

generated barcode is decodable according to a predetermined standard, and an editor for assembling the building blocks when the document is authored, the editor providing for ~~adaption~~ adaptation of the embedded program to make a visual aspect of the barcodes generated under control of the embedded program specific to the document and/or the field, without affecting a result of decoding the barcode.